Having set forth the preferred embodiments, the invention is now claimed to be:

1. A method of generating a black component of an output color comprising:

receiving input color data defined in a first color space;

converting the received input color data to intermediate color data defined in an intermediate color space;

calculating a first black component factor from the input color data;

calculating a second black component factor from the intermediate color data; and

combining the first black component factor and the second black component factor.

2. The method of generating a black component as set forth in claim 1, where the receiving input color data step comprises receiving color separation values.

3. The method of generating a black component as set forth in claim 1, where the converting step comprises converting the received input color data to CMY.

4. The method of generating a black component as set forth in claim 2, where the calculating a first black component factor step comprises applying a function to the input color separation values where the function depends on predefined threshold values.

5. The method of generating a black component as set forth in claim 1, where the first color space comprises HSV and where the calculating a first black component factor step comprises applying a predetermined function to the HSV input color data.

6. The method of generating a black component as set forth in claim 3, where the calculating a second black component factor step comprises calculating the second black component factor from the converted CMY values.

7. In an image output terminal, a method of outputting a digital color image comprising:

converting input components corresponding to a color in a first color space to intermediate components in a second color space, where the second color space includes only chromatic components; and

deriving an output black component from both the intermediate components and the input components.

8. The method of outputting a digital color image as set forth in claim 7, further comprising adjusting the intermediate components based on the derived output black component.

9. The method of outputting a digital color image as set forth in claim 7, further comprising outputting data comprising the intermediate components and the output black component.

10. The method of outputting a digital color image as set forth in claim 7, where the deriving an output black component comprises:

applying a defined process to the input components;

applying a different process to the intermediate components; and

combining the processed input components and the differently processed intermediate components.

11. The method of outputting a digital color image as set forth in claim 10, where the applying a different process to the intermediate components comprises minimizing CMY values.

12. The method of outputting a digital color image as set forth in claim 10, where the first color space includes HSV and the applying a defined process comprises applying a function including H, S and V, where the function is different depending on the position of an S value with respect to a threshold.

13. The method of outputting a digital color image as set forth in claim 10, where the first color space includes HSV and the applying a defined process

comprises applying a function including H, S and V, where the function is different depending on the position of a V value with respect to a threshold.

14. The method of outputting a digital color image as set forth in claim 7, where the first color space comprises HSV and the deriving comprises:

applying a function to the intermediate components; and

for input components including V below a V threshold and S below an S threshold, applying a function varying with V and the V threshold.

15. A system for creating an achromatic component for an output color space from an input color space including only chromatic components, the system comprising:

a receiver that receives input color separations in the input color space;

a converter that converts the input color separations to intermediate color separations; and

an achromatic component generator in data communication with the receiver and the converter, the achromatic component generator calculating an achromatic color separation from functions including at least one input color separation and intermediate color separation.

16. The system as set forth in claim 14, where the input color space is defined in HSV and the functions include a first function g(H,S,V), and a second function h depending on the intermediate color separation, the system further comprising a calculator which calculates g(H,S,V) by implementing the equation:

$$g(H,S,V) = 1 - \begin{cases} a_H S^2 + b_H S + c_H & \text{for } S > S_t \text{ and } V > V_t \\ 1 - \left(1 - \frac{V}{V_t}\right)^2 & \text{for } S \le S_t \text{ and } V < V_t \\ \left(a_H S^2 + b_H S + c_H\right)\left[1 - \left(1 - \frac{V}{V_t}\right)^2\right] & \text{for } S > S_t \text{ and } V < V_t \\ 1 & \text{for } S \le S_t \text{ and } V > V_t \end{cases}$$

where coefficients a_H, b_H and c_H are different functions of hue angle, and S_t and V_t are threshold values for saturation and value, respectively.

17. The system as set forth in claim 14, where the intermediate color separations are defined in CMY.

18. The system as set forth in claim 14, further comprising a post-processor that adjusts the intermediate color separations based on the calculated achromatic color separation.